Breton, Mary B

From: Scott Rocknak <scott@scottrocknak.com>
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To: DEP Rule Comments

Subject: NRCM Emissions Regulation Initiative

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To whom it may concern,

Regarding the citizen petitions initiated by the NRCM I offer the following comments on the proposed changes.

I have background in electrical systems and advanced battery management. My work entails several years of specifying and designing electric and hybrid marine craft as well as the battery management systems that regulate the delivery of electric power to the propulsion devices. In many cases the designs incorporate the same automotive battery packs that Volkswagen and BMW use.

In addition to electric and hybrid systems I have experience in self-contained marine solar and wind generation. These differ slightly from residential and industrial uses simply in scale only and the marine systems must be completely self-sufficient.

I am a proponent of electrical tools, outboards, cars, lawn equipment, and so forth. I am NOT a proponent of this initiative. And the following is why. Please note I am listing real-world observations as I know you will be seeing lots of scientific reasoning:

- 1) When electric driven systems fail, they fail spectacularly. I know, because I need to fix them.
- 2) Electric vehicles currently (and for the foreseeable future) require more maintenance than a gas or diesel powered car.
- 3) Cold weather greatly effects duration and range. Maine is cold. Try running down I95 on a -10 deg F. cold winter night from Houlton to get to Bangor. 115 miles with a 120 to 140 mile cold-weather range? In the winter? At night? With your family in the car?
- 4) Battery duration. The price to replace a battery in a vehicle, can exceed the value of the car.
- 5) A friend owns a Rivian truck. He can't pull anything on a trailer w/o reducing his range by one-half. Mainers use their vehicles as a work horse. My feeling is the proponents of this change drive locally for errands in their electric cars. This purpose is fine, but not for the average working Mainer.
- 6) Unexpected fire risk. 30,000 gallons of water to extinguish a Tesla fire. How many fire departments in Maine can handle one car fire? How about two, three, five? How about the house it was in at the same time?
- 7) Go to the indoor car garage at the jetport in Portland. Look at the sign over the door. Does it preclude a Chrysler electric minivan from parking there? Are Mainers to put 2-phase chargers in their garages to both re-power their cars and keep them warm? If electric bicycles have been seen to burn buildings down, why take a risk with a car in the same house as your kids? Are people expected to become power management experts? At our facility we prohibit the charging of batteries overnight and have so for years.
- 8) Cost. I looked at buying a plug-in Jeep Grand Cherokee figuring I could drive around local on only electric. The cost was \$35,000 over the cost of a standard gas Jeep Grand Cherokee. I stuck with the gas version. The average Mainer will suffer if forced to buy electric.

9) The majority of power in Maine comes from Natural Gas. I monitor the fuel mix for New England. The mix as I write this Natural Gas 58% far exceeds nuclear 27%, renewables 9% and hydro 7%. The point is, even with massive wind and solar farms, the electric cars are utilizing petro-chemicals.

At some point electric cars may become viable but not until a serious overlap in technologies has been achieved. Again, my feeling is the initiative as stated does not make sense.

W. Scott Rocknak

Camden, Maine